

## Office of the Commissioner of Railroads

## Surrebuttal of City of Madison

Petition of the Wisconsin Department of Transportation for the Establishment of a Public Crossing of the Wisconsin & Southern Railroad, LLC Tracks with Wagon Trail Pathway in the City of Madison, Dane County

Docket 9170-RX-316

April 26, 2016

1   **Q.    Please state your name.**

2    A.    My name is Anthony Fernandez, P.E.

3   **Q.    What is the purpose of your additional testimony?**

4    A.    I have reviewed the rebuttal materials submitted by WSOR on April 15, 2016 in response  
5       to Petitioner's and the City's original testimony. The purpose of my current testimony is to  
6       correct some errors or mis-conceptions in WSOR's rebuttal, clarify both points of  
7       agreement and disagreement and respond to the alternatives proposed in the report  
8       prepared by Patrick Engineering Inc.

9

10   **Q.    Are you sponsoring any new Exhibits?**

11   A.    No, but this testimony may make reference to exhibits already in the record.

12

13   **Q.    What are the main areas of the WSOR's rebuttal which you believe need to be**  
14       **corrected or clarified?**

15   A.    First, WSOR's materials state that the petition is "...driven mainly by the ongoing delays  
16       of planning and construction of the Glacial Drumlin Trail." This is not correct. Other  
17       references are made to the "temporary" nature of the proposed crossing and contain

1 misconceptions about the relevance of the timing of the County's Glacial Drumlin project  
2 in relation to this petition. I believe that some clarification of the City's intentions would  
3 be useful. Second, WSOR's rebuttal states that the proposed crossing "....would prevent  
4 the WSOR from constructing a planned 6,625 foot siding..." While the proposed crossing  
5 would impose some restrictions, we do not believe that it would prevent construction of  
6 the siding. Moreover, those restrictions would have compelling justification aside from  
7 the proposed bicycle crossing. This important issue requires additional clarification.  
8 Third, their materials state or imply that, due to conditions at the site or the nature of rail  
9 operations, the crossing cannot be made safe and would encourage trespass. We disagree  
10 strongly with both of these assertions and feel that additional discussion is necessary to  
11 properly understand conditions at the proposed crossing location. Finally, the materials  
12 do not accurately convey the impacts of the proposed path on the adjacent Terra property.

13  
14 **Q. What are the City's intentions with this project and what is the relevance of the**  
15 **timing of the County's Glacial Drumlin Trail project?**

16 A. The City's goal is to complete the entire length from Vondron to the Interstate, fulfilling  
17 our commitment in the 1996 Memorandum of Agreement with Fitchburg, Dane County and  
18 the WDNR previously discussed. A crossing of the tracks at Wagon Trail to create access  
19 to the path from the residential neighborhood north of the tracks has been an important  
20 element of the project from its earliest conception. Wagon Trail will continue to be an  
21 important access point when the path is ultimately extended to the village of Cottage  
22 Grove, regardless of when that extension is completed. However, until such time as Dane  
23 County is able to extend the path to Underdahl Road, the Wagon Trail access point is not

1 just important but critical. Under the WisDOT FDM process and FHWA environmental  
2 rules, the City will not be permitted to construct Segment 4 (Vondron to Wagon Trail)  
3 without either the new crossing or the continuation to Underdahl. Considering the delays  
4 to the County project and time restrictions on the City's TAP funding, the City would not  
5 likely be able to construct any portion of the project using TAP funding without the  
6 access at Wagon Trail. It is conceivable that the path could ultimately be built from  
7 Vondron to Underdahl without a neighborhood connection at Wagon Trail but that would  
8 certainly diminish the usefulness of the path. Importantly it would also create an  
9 incentive for people to cross the tracks in unauthorized and unprotected locations to  
10 access the path. The City would not likely get a second chance for federal funding.

11  
12 **Q. What do you believe would be the impacts of the proposed crossing on the rail**  
13 **siding being planned by WSOR and what public safety issues are involved?**

14 A. The proposed crossing would not prevent the WSOR from constructing a planned siding  
15 from Vondron Road to Underdahl Road. The City will support the siding, with some  
16 restrictions, and would generally not oppose the future crossing modification if and when  
17 such a siding is approved by WisDOT and proposed for construction. However, as stated  
18 in WSOR rebuttal materials, rail cars could not be parked in the vicinity of the crossing  
19 for significant durations and rail cars would have to be left separated at the crossing. We  
20 understand this would reduce the total storage length slightly and reduce operational  
21 efficiency in some ways, but we feel strongly that maintaining a gap in static car storage  
22 is necessary even if a public crossing is not approved at this location. Continuous storage  
23 of over 6000 feet of rail cars within the City would create an unacceptable barrier from a

1 public safety and public services standpoint. As noted in Patrick Engineering's report, the  
2 City has a public utility easement across the rail right-of-way where the crossing would  
3 be located, largely for the purpose of enabling our maintenance forces to access the  
4 public sanitary sewer easement on the World Dairy site. Planned maintenance of the  
5 sanitary sewer line is very infrequent, but emergency access is critical. The World Dairy  
6 site covers more than 200 acres and is crossed by Pennito Creek. As water levels are  
7 raised by WisDOT to restore wetland hydrology, large portions of this site will become  
8 virtually impossible to access from the south with conventional vehicles. Access to the  
9 site from the east is prevented by the fenced Interstate, and access from the west is  
10 prevented by fenced industrial properties. Also on the northern portion of the World  
11 Dairy site are electrical transmission lines owned by ATC and sanitary interceptor  
12 belonging to Madison Metropolitan Sewer District. Continuous storage of rail cars from  
13 Vondron to Underdahl could make it difficult or impossible to access these facilities as  
14 well. From a broader public safety perspective, 6000 feet of continuous rail car storage  
15 would make large areas inaccessible for police, fire and medical emergency vehicles.  
16 This could have serious law enforcement and safety implications (even for the railroad  
17 itself) in the event of trespass, vandalism, fire or an accident. Finally, we would point out  
18 that 200 acres of open space, particularly with restored native vegetation, will be an  
19 attractive destination for residents of the neighborhood north of the tracks. There is ample  
20 evidence today of its use, including well-worn foot paths. Regardless of whether this use  
21 is encouraged or even permitted by WisDOT, it will continue to happen unless major  
22 measures are undertaken to prevent it. A continuous barrier created by stored rail cars  
23 would undoubtedly result in some (irresponsible) people breaching gaps around or under

1 rail cars. By far the best way to neutralize or mitigate the negative impacts of this use is  
2 to provide a safe, convenient, controlled access point. In summary, we feel it would be  
3 irresponsible and dangerous to create a continuous 6000 foot barrier to lands in the city  
4 which are almost impossible to access from any other direction. The proposed crossing at  
5 Wagon Trail is located near the mid-point of the 6000 foot siding and at the only public  
6 street between Vondron and Undrdahl, making it the logical location for a gap in the  
7 barrier.

8  
9 **Q. Can you address the concerns expressed in WSOR's rebuttal regarding sight**  
10 **distances?**

11 A. We strongly disagree that a safe crossing cannot be created in this location due to sight  
12 distances or that the proposed path and crossing would increase trespass in the rail  
13 corridor. First, as stated in our direct testimony and as confirmed in Patrick  
14 Engineering's report, adequate clearing sight distance is available (with some vegetation  
15 removal) at this site. Vertical and horizontal geometry are favorable in this location, with  
16 the track curve beginning several hundred feet west of the crossing location. Clearing  
17 sight distance is the relevant parameter for a stop-controlled crossing. The full  
18 approaching sight distance triangles (lateral visibility across quadrants) may not be  
19 available at this site, depending on how the analysis is done. However, this is typical of  
20 many if not most urban locations, and this is addressed by requiring vehicles to stop.  
21 Furthermore, the approaching sight distances shown in Patrick Engineering's report are  
22 not based on realistic speeds for bicycles at this location. While athletic bicyclists are  
23 able to achieve 25 mph under favorable conditions, such conditions are not available for

1 either approach to this crossing. Bicyclists approaching from the north must: 1) negotiate  
2 an abrupt change from the right side of the street to the left side (an intentional design  
3 element to increase awareness of the street end; 2) intentionally leave the street and enter  
4 the connecting path with abrupt grade changes at the curb and pedestrian ramp; and 3)  
5 proceed a very short distance on connecting path with no opportunity for significant  
6 acceleration. An appropriate design speed for these conditions would be no greater than  
7 10 mph. Approaching from the south, bicyclists would need to make a 90 degree turn  
8 with a very small radius, requiring a speed of less than 10 mph. The actual conditions are  
9 much safer and conducive to low speeds and bicyclist awareness than characterized in  
10 Patrick Engineering's report. We have recommended stop signs and other passive devices  
11 to create the stop condition, but we would likely concur with whatever measures the OCR  
12 determines are necessary to insure a safe crossing. We are confident that physical and  
13 geometric conditions at this location easily support a safe crossing if appropriate  
14 measures are used. We also note that a vehicular crossing was previously approved by the  
15 OCR for this same location.

16  
17 **Q. Can you address the broader concerns expressed in WSOR's rebuttal regarding rail**  
18 **safety, trespass and costs?**

19 A. The WSOR has also (very appropriately) raised broader issues of track safety, trespass  
20 and long-term costs. We completely agree with this emphasis on safety and are in support  
21 of the railroad industry's efforts to increase awareness and reduce trespass. We also  
22 understand that a new crossing requires significant funds on an ongoing basis, from both  
23 the railroad and the State, to maintain its condition and warning devices. However, the

1 basic assumption stated in the Introduction of Patrick Engineering's report, that "....the  
2 safest railroad crossing is the one that does not exist" is a gross over-simplification at  
3 best. Obviously there is a need for safe, controlled, public railroad crossings in any  
4 populated urban area, and the lack of such crossings in appropriate locations is not just a  
5 matter of public "convenience". This lack can result in serious negative safety impacts.  
6 This is particularly true in the case of long, uninterrupted barriers to pedestrian and  
7 bicyclist mobility, as these users can and do regularly cross tracks in uncontrolled  
8 locations to access desired destinations. While not condoning this activity, it is  
9 irresponsible to ignore it. In the Wagon Trail location, the large open space as well as a  
10 major regional path on the south side of the tracks will be strong attractions for residents  
11 north of the tracks, and the terrain provides little natural barrier. By far the safest and  
12 most practical way to discourage unauthorized crossings in random locations is to  
13 provide a safe, controlled crossing in a convenient location. Similarly, railroad tracks are  
14 often subject to longitudinal trespass, i.e. people walking along or on the tracks to get  
15 where they are going. Construction of a bike and pedestrian path parallel to the tracks  
16 provides a much more attractive alternative and greatly if not completely eliminates the  
17 rail trespass. It is possible to observe this in several locations in Madison, where paths  
18 parallel to tracks carry thousands of users per day while virtually no one walks along the  
19 tracks themselves. In summary, well designed paths with safe crossings at reasonable  
20 spacing have to be seen as important elements of the solution to railroad trespass, not as  
21 contributing to the problem.

1   **Q.    How would you describe the impacts on the Terra Construction and Engineering**  
2       **property differently from WSOR's rebuttal?**

3    A.    Understandably, Terra is not in favor of the path project, and the railroad's rebuttal is  
4       correct in assuming that we would acquire the path corridor using eminent domain.  
5       However, this is completely normal for almost all transportation projects undertaken by  
6       the City. The eminent domain process is governed by State statutes and strongly protects  
7       the rights of property owners throughout every stage of the process, including fair  
8       compensation and rights of appeal. The Patrick Engineering report somewhat confusingly  
9       states that "...impacts for this project will be more than easements...." as the City "...will  
10      need to acquire an additional 20 feet of land..." To clarify, the primary impact on Terra  
11      will be the acquisition of the northerly 20 feet of the property, which may be in the form  
12      of either a permanent limited easement (PLE) or fee acquisition. The City would typically  
13      follow the property owner's preference for PLE *versus* fee acquisition. There will also be  
14      a narrow temporary easement during construction which would expire, with the property  
15      completely restored, at the end of construction. The 20-foot easement as currently  
16      designed would not permanently restrict Terra's existing driveway or gated access. Any  
17      impacts to existing fencing, storage buildings or other facilities on their property, as well  
18      as any costs to relocate structures or re-orient the site to create comparable utility would  
19      be completely compensated through the price of the easement or "cost to cure". The basic  
20      principle involved is that the property owner is fully and fairly compensated based on fair  
21      market value of their property before and after the acquisition. The main complication in  
22      this case is that some of Terra's facilities and much of their security fence lie not on their  
23      property but within the rail right-of-way, and therefore would not ordinarily be



1 compensated. We have discussed this with Terra, and City Engineering will make every  
2 effort to pursue a fair and equitable solution acceptable to Terra. From the railroad's  
3 standpoint, the acquisition actually removes a significant existing encroachment in the  
4 rail right of way, and should be seen as a positive benefit of the project. The actual area  
5 of property to be acquired represents a very small percentage of the Terra site. (This  
6 could be reduced further if WisDOT and the railroad were to allow some of the path to be  
7 on rail property by permit.) Finally, on the issue of a possible future rail spur into the  
8 Terra property, City Engineering has expressed to Terra its willingness to preserve this  
9 option with appropriate language included in the final acquisition documents. If a siding  
10 were constructed it would require minor re-alignment of the path and a separate crossing  
11 surface at the siding tracks. This is certainly feasible as we have this condition currently  
12 on other paths. In summary, we are aware of Terra's concerns but are confident that our  
13 normal process will result in a fair outcome with no significant long-term loss of utility  
14 on their site.

15  
16 **Q. Have you reviewed the alternatives to the current crossing proposal as presented in**  
17 **the report by Patrick Engineering, Inc. and are they feasible?**

18 A. I have reviewed the Alternate Locations for Crossings in the report prepared by Patrick  
19 Engineering and believe that they are either not viable or not meaningful alternatives to  
20 the proposed at-grade crossing. Alternatives 2 and 3 recommend use of Underdahl Road  
21 and Vondron Road respectively as crossing locations in place of Wagon Trail. We do not  
22 see these as "alternatives" since both these existing public street crossings of the railroad  
23 are already part of our overall concept for the path and in no way address the need for an

1 additional crossing / access point between them. In the context of a bicycle and pedestrian  
2 improvement, an access point which is more than a half mile from the desired location is  
3 not a feasible alternative and typical users are much more likely to simply try to cross the  
4 tracks in unauthorized locations. Alternative 1 merits further discussion. As stated in the  
5 report, the City would consider a grade-separated crossing to be desirable if it were  
6 feasible. It is not. We have done considerable investigation and are very familiar with the  
7 ground elevations, drainage patterns, flood elevations, track elevations and other factors  
8 bearing on the feasibility of an underpass for the path. The location of the 36-inch culvert  
9 (and former wood trestle bridge) is the most promising location, but there is not nearly  
10 adequate vertical clearance to make an underpass feasible. While at present there is not a  
11 great deal of flow at this location, it does drain a small area. And it would potentially drain  
12 a much larger area except that the existing ditch on the north side of the tracks is not  
13 properly graded and storm runoff appears to be flowing over the tracks immediately west  
14 of the Interstate. Drainage in the area of the crossing is generally to the west and south. If  
15 water does not drain across the tracks (and the path) in the vicinity of the 36-inch culvert  
16 into the wetland immediately south, it must flow west at a flat grade to the existing bridge  
17 to the west. In other words, any significant lowered grade in the vicinity of the culvert,  
18 below the existing invert elevation, will simply become a basin which will pond water  
19 (even if flows are minimal). There is about 7 feet of vertical separation from the culvert  
20 invert to the top of rail. The absolute minimum vertical clearance standard for an  
21 underpass is 8 feet. The additional depth of the structure carrying the tracks over the path  
22 underpass would be a minimum of about 2.5 feet, from the top of rail to the roof of the  
23 underpass. This would place the path surface a minimum of 3.5 feet below the existing

1 drainage elevation, a "sump" which could not be drained by gravity and would be filled  
2 with water continuously. A proper underpass in this location would require a path  
3 elevation at least 1 foot above the drainage elevation, and therefore require the tracks to be  
4 raised about 4.5 feet. We believe that neither lowering the path nor raising the tracks by  
5 this amount are feasible and therefore have not pursued this alternative further. This  
6 concludes my testimony.